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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,168	03/26/2004	Richard D. Eyestone	SMRT001US0	7981

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EXAMINER
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HSU, RYAN

ART UNIT	PAPER NUMBER
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3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/810,168

Applicant(s)

EYESTONE ET AL.

Examiner

Ryan Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

In response to the amendments filed on 11/09/06, claims 1, 10, and 18 have been amended. Claims 1-21 are pending in the current application.

#### ***Claim Objections***

Claim 6 is objected to because of the following informalities: the limitation "wherein the electronic components are mounted on a board such that the board and the original shaft and reinserted into a second shaft" does not make the applicant's intentions clear with regards to the invention. The examiner suggests using "such that the board and the original shaft are reinserted into a second shaft". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-21 are rejected under 35 U.S.C. 103(a) as obvious over Kobayashi (US 5,233,544) and Zeiner-Gunderson (US 5,941,779) and in further view of Hammond (US 3,945,645).**

Regarding claims 1, 10, and 18, Kobayashi teaches an intelligent sport device system for measuring a swing, comprising: a shaft with a removable electronic components unit (*see Fig. 13*

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*and the related description thereof*), wherein the electronic components unit is inserted into and resides solely with the shaft and wherein the electronic components unit gathers swing or stroke dynamic data (*see col. 2: ln 5-25, Fig. 13 and the related description thereof*) and a display for displaying the measured swing information (*see display [79] of Fig. 7 and the related description thereof*). Additionally, Kobayashi's swing measurement device is comprised of a plurality of accelerometers capable of producing linear acceleration measurements of a sports device in three axes during a swing or stroke of the sports device (*see col. 3: ln 5-29, col. 4: ln 5-40*). Kobayashi does not define or use the word "gyroscopes" within its specification of its swing measurement device however; a gyroscope is defined as a unit that is capable of producing angular rate measurements. Kobayashi does teach the use of accelerometers, which are capable of measuring two to three axes of acceleration at the same time to calculate the angular momentum of the swing device (*see col. 3: ln 55-col. 4: ln 68*). Furthermore, a gyroscope is simply the ability to measure the conservation of angular momentum of a device. Kobayashi outputs this information using the data from the accelerometers to derive the data that would be provided in the applicant's "gyroscope" through a series of calculations and formulas that are well known in basic mechanical physics. Therefore the plurality of accelerometers taught in Kobayashi effectively have a dual purpose and act as a plurality of accelerometers and a plurality of gyroscopes which are used to produce linear and angular rate measurements of a sports device in three axes during the swing or stroke of the sports device. Assuming arguendo that the above reasoning is not sufficient with regard to the gyroscopes, in a related swing-training device the implementation of gyros for indicating rotational rate measurements are found in the prior art of Zeiner-Gunderson (herein referred to as "Zeiner"). Zeiner teaches in an analogous swing device

the implementation of gyroscopes as a simple and effective way to provide the system with sensing the forces applied by the users swing with adding restrictive forces that might otherwise skew the data of the swing (*see col. 2: ln 1-42*). Zeiner teaches that this allows the user to get a more accurate reading without affecting the users "natural swing". Therefore one would be motivated to implement gyroscopes in measuring the swing of a sports instruction device in order to allow for the user to maintain their natural swing while having the ability to accurately represent the device's orientation in a three-dimensional space (*see col. 3: ln 5-20 and ln: 48-42*). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the gyroscopes of Zeiner with the swing measurement device of Kobayashi in order to create a golf club device that would help improve a users swing while taking more accurate measurements. However, Kobayashi and Zeiner are still silent with regards to a transmission device that includes an RF transmitter for transmitting the linear acceleration measurements and the angular rate measurements and logic coupled to the RF link box for transforming the linear acceleration measurements and the angular rate measurements into swing information corresponding to the swing of the sport device. In a related swing measurement device, Hammond teaches a system that transmits the information gathered from a plurality of accelerators to transmit data gathered from a swing through a RF transmitter and an RF link box for receiving the transmissions sent from the RF transmitter of the swing device (*see transmitters [22-26] and FM receiver [30] of Fig. 1 and the related description thereof*). One would have been motivated to incorporate the RF transmission system of Hammond as opposed to the wired transmission system of Kobayashi to allow for more freedom of movement for the user and not be hindered by a wire while attempting a swing on the device. Therefore it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to incorporate the RF transmission system of Hammond with that of Kobayashi in order to allow for a wireless swing measurement device.

Regarding claims 2-3 and 11, Kobayashi teaches an intelligent sport device system wherein the shaft is the shaft of a golf club and the shaft services as a joystick of a video game controller (*see Fig. 1 and 7 and the respective related description thereof*).

Regarding claims 6-7, 14-15, and 19-20, Kobayashi teaches an intelligent sport device wherein the electronic components are mounted on a board such that the board and the original shaft are reinserted into a shaft for producing and transmitting linear acceleration and angular rate measurements corresponding to a second shaft (*see Fig. 7 and the related description thereof*). Additionally, Kobayashi teaches wherein the electronic components further comprise logic for determining whether the board and electronic components are inserted into the original shaft or the second shaft (*see col. 6: ln 14-67*).

Regarding claims 8 and 16, Kobayashi teaches a sport instruction that comprises the steps of designating the swing a swing of interest (*see Fig. 7 and the related description thereof*).

Regarding claims 9, 17, and 21, Kobayashi teaches an intelligent sport device that comprises logic for marking the swing as a reference swing. Furthermore, Kobayashi teaches a device for transmitting the linear acceleration measurements and the angular rate measurement to a remote location, which receives and processes the logic, based upon the transmitted data and displays the information to the user (*ie: translational and rotational measurements*) (*see Figs. 3, 6-7 and the respective related description thereof*).

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Kobayashi and Zeiner-Gundersen both teach a sports instruction device that incorporates a computer to process the information collected by sensors located on a golf club device. However, they are silent with regards to its implementation with other sports that incorporate swings. However, Hammond in an analogous swing measurement system and method states that it would be appreciated by those skilled in the art that the swing measurement techniques taught in his swing instructional device would likewise be utilized with other athletic implements such as baseball bats, tennis rackets and the like. Therefore it would be obvious to one of ordinary skill in the art in light of teachings in Hammond to incorporate the swing measurement devices into other sports that have similar swing movements such as golf.

Regarding claim 4-5, 11-13, Hammond teaches a sports instruction device wherein the shaft is the shaft of a golf club, the shaft of a racket (*ie: tennis racket, racquetball racket*) or the shaft of a bat (*see col. 1: ln 65-col. 2: ln 6*).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Hsu whose telephone number is (571)272-7148. The examiner can normally be reached on 9 :00-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert P. Olszewski can be reached on (571)272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



RH

January 12, 2007



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A handwritten signature in cursive script, reading "Scott E. Jones".

**SCOTT JONES**  
**PRIMARY EXAMINER**